

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026616**Date Inspected:** 31-Oct-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Fred Von Hoff**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Sections**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above.

This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

**Orthotropic Bridge Girder (OBG) Sections:**

13E/14E – weld joint D-2: This weld joint requires the minimum preheat temperature (200°F) to be continuous during welding and post heating for 3 hours after the completion of welding. This QA Inspector used an electronic temperature gauge at the beginning of the shift to verify the preheat temperature was greater than 200°F. This QA Inspector observed QC Inspector Fred Von Hoff verify the following Flux Cored Arc Welding (FCAW) parameters for ABF welding personnel James Zhen (#6001); 285 amperes and 24.7 volts at a travel speed of 190 mm per minute to produce a heat input of 2.22 Kj per mm. The heat input and welding observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-3110-4 being used by the QC Inspector. This QA Inspector periodically observed QC Inspector Fred Von Hoff monitoring the welding at this location which included the welding parameters, preheat and interpass temperatures and in process visual inspections. This QA Inspector observed welding appeared to be completed at approximately 1200 hours this date. This QA Inspector observed the weld area was covered with the induction heat blankets upon the completion of welding. This QA Inspector performed several random verifications during the 3 hour post heat cycle and verified the temperature was greater than 200°F with an electronic temperature gauge, see photo below. QC Inspector Fred Von Hoff informed this QA Inspector the post heat was performed for a minimum time of 3 hours and was

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completed during normal working hours this date. The welding and post weld heating performed at this location this date appeared to comply with the contract requirements.

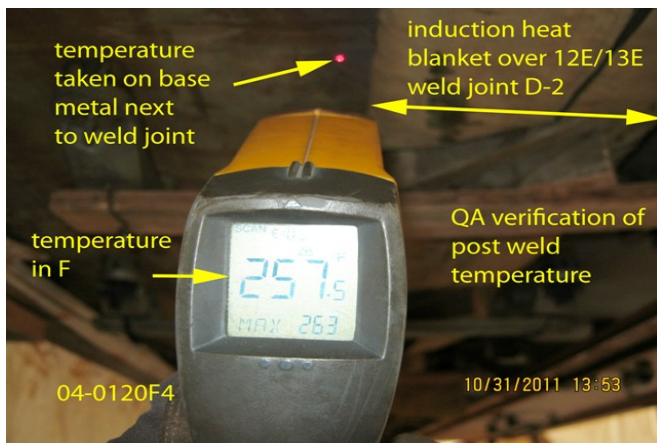
11E-PP100-E3 Lifting Lug Hole (LLH) #1, #2 and #3: This QA Inspector was informed by Lead QC Inspector Bonifacio Daquinag Jr. the LLH noted above had been inspected and accepted by QC personnel and was ready for QA verifications. This QA Inspector confirmed with QA Inspector Jojo Lizardo that he had performed the visual and Magnetic Particle Testing verifications. This QA Inspector performed Ultrasonic Testing (UT) at a random location for approximately 25% of the entire weld length. This QA Inspector did not observed any UT signals depicting a defect at this time.

11E-PP104-E3 Lifting Lug Hole (LLH) #2: This QA Inspector was informed by Lead QC Inspector Bonifacio Daquinag Jr. the LLH noted above had been inspected and accepted by QC personnel and was ready for QA verifications. This QA Inspector confirmed with QA Inspector Jojo Lizardo that he had performed the visual and Magnetic Particle Testing verifications. This QA Inspector performed Ultrasonic Testing (UT) at a random location for approximately 25% of the entire weld length. This QA Inspector did not observed any UT signals depicting a defect at this time.

This QA Inspector verbally informed QA SPCM Lead Inspector, Daniel Reyes, of the issues noted in this report for compliance therefore for further details of issues of significance see QA SPCM Lead Inspector, Daniel Reyes, Daily Inspection Report (6031) for this date.

### Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this shift. Except as described above and noted above there were no notable conversations.



### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Hager,Craig

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer